a plurality of electrical conductors, each electrical conductors comprising,

a first end on the component that is at a position adjacent the surface of the electronic component but fanned out from a corresponding contact location,

a compliant elongated electrical conductor positioned at the first end of the electrical conductor,

an electrical connection between the corresponding terminal and the first end,

where the compliant elongated electrical conductor is free standing, having a first end fixed adjacent to the electronic component and having a second end at a position not adjacent the electronic component,

where the compliant elongated electrical conductor can be displaced such that the second end thereof moves in relation to the first end of the compliant contact structure, and

the assembly including an active semiconductor device connected to function at least in part by communication of electrical energy through at least one of the contact elements.

B1 64. (Added) The assembly of claim 64, wherein the electronic component comprises a silicon substrate.

65. (Added) The assembly of claim 64, wherein the electronic component is mated directly with an active semiconductor device.

66. (Added) The assembly of claim 66, wherein the electronic component is a socket mated directly with and to securely connect to an active semiconductor device.

67. (Added) A method of making a fanout electrical contact structure, comprising:

providing a substrate having a surface and a plurality of contact locations adjacent the surface,

fabricating a plurality of fanned out electrical contact structures, this fabricating for at least one of the fanned out electrical contact structures comprising,

selecting a fanout area adjacent the surface of the substrate but fanned out from a corresponding contact location, which is a selected one of the plurality of a contact locations,

forming an electrical connection between the fanout area and the corresponding contact location,

forming a compliant elongated electrical conductor at the fanout area,

whereby the compliant elongated electrical conductor is electrically connected to the corresponding contact location,

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where the compliant elongated electrical conductor is free standing, having a first end fixed adjacent to the electronic component and having a second end at a position not adjacent the electronic component, and

where the compliant elongated electrical conductor can be displaced such that the second end moves in relation to the first end of the elongated compliant electrical conductor.

68. (Added) The method of claim 68 of making a fanout electrical contact structure, further comprising:

disposing a patterned layer of conductive material to connect selected ones of the first ends on the component to selected ones of the plurality of contact locations.

69 20. (Added) The method of claim 69 of making a fanout electrical contact structure, wherein disposing the layer of conductive material further comprises:

forming a multilayer conductive/dielectric substrate over a region of the substrate.

70 21. (Added) The method of claim 70 of making a fanout electrical contact structure, further comprising:

a multilayered electrically conductive/dielectric substrate which comprises a patterned electrically conductive layer.

B1 1 72. (Added) The method of claim 68 of making a fanout electrical contact structure, further comprising:

providing one or more layers of one or more conductive materials to connect selected ones of the fanout areas to selected ones of the plurality of contact locations.

2 73. (Added) The method of claim 68 of making a fanout electrical contact structure, wherein the electrical connection comprises a metal.

3 74. (Added) The method of claim 68 of making a fanout electrical contact structure, wherein the electrical connection comprises a metal/dielectric substrate.

4 75. (Added) The method of claim 74 of making a fanout electrical contact structure, wherein the electrical connection comprises copper.

5 76. (Added) The method of claim 74 of making a fanout electrical contact structure, wherein the electrical connection comprises a layer comprising gold.

76. (Added) The method of claim 68 of making a fanout electrical contact structure, wherein the electrical connection comprises a metal/polymer substrate.

77. (Added) The method of claim 68 of making a fanout electrical contact structure, wherein the electrical connection comprises a printed circuit board.

78. (Added) The method of claim 68 of making a fanout electrical contact structure, further comprising a plurality of dielectric films and a plurality of electrically conductive layers.

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79. (Added) The method of claim 68 of making a fanout electrical contact structure, further comprising:

disposing a multilayer electrically conductive dielectric substrate over a region of the substrate, and

forming the compliant elongated electrical conductor by securing a first end of an elongated electrical conductor to the fanout location, the elongated electrical conductor is shaped to a compliant shape with a free end displaced away from the surface of the substrate to form the compliant elongated electrical conductor, and

depositing a coating material over the elongated electrical conductor to form a compliant contact structure.

80. (Added) The method of claim 80 of making a fanout electrical contact structure, wherein the compliant contact structure comprises a coating comprising a material selected from the group consisting of nickel, copper, cobalt, gold and platinum.

81. (Added) The method of claim 80 of making a fanout electrical contact structure, wherein the elongated electrical conductor comprises a material selected from the

group consisting of nickel, copper, gold, copper alloy, gold alloy, aluminum and palladium.

82. (Added) The method of claim 80 of making a fanout electrical contact structure, wherein the compliant contact structure comprises an elongated electrical conductor coated by a metallic coating.

83. (Added) The method of claim 83 of making a fanout electrical contact structure, wherein the elongated electrical conductor comprises gold and the metallic coating comprises nickel.

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84. (Added) The method of claim 83 of making a fanout electrical contact structure, wherein the elongated electrical conductor is between about 1.0 and 5.0 mils.

85. (Added) The method of claim 83 of making a fanout electrical contact structure, further comprising extending the compliant contact structure away from the substrate distance of about 100 mils.

86. (Added) The method of claim 68 of making a fanout electrical contact structure, further comprising:

disposing a mulitlayer conductive/dielectric substrate over a region of the substrate,

forming the compliant contact structure by securing an elongated electrical conductor in the fanout location, the elongated electrical conductor shaped to a compliant shape with a free end displaced away from the surface of the substrate, and

depositing a coating material over the elongated electrical conductor to form a compliant contact structure.

87. (Added) The method of claim 68 of making a fanout electrical contact structure, further comprising:

providing a first fanout substrate and a second fanout substrate disposed on said first fanout substrate.

88. (Added) The method of claim 88 of making a fanout electrical contact structure wherein said second fanout substrate is a thin film wiring structure.

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89. (Added) The method of claim 89 of making a fanout electrical contact structure, wherein said thin film wiring layer is a multilayer wiring structure comprising a plurality of patterned dielectric layers and a plurality of patterned electrically conductive layers.

90. (Added) The method of claim 68 of making a fanout electrical contact structure, wherein the space between at least some pairs of terminals is on the order of about 8 mils.

91. (Added) A method of making a fanout electrical contact structure, comprising:

providing a substrate having a surface and a plurality of contact locations adjacent the surface,

fabricating a plurality of fanout electrical contact structures, this fabricating for at least one of the fanout electrical contact structures comprising,

forming a compliant contact structure, at least part of which is adjacent the surface of the substrate but fanned out from a corresponding contact location, which is a selected one of the plurality of contact locations,

forming an electrical connection between the compliant contact structure and the corresponding terminal,

whereby the compliant contact structure is electrically connected to the corresponding contact location,

where the compliant contact structure is free standing, having an end fixed adjacent to the electronic component and having a second end at a position not adjacent the electronic component, and

where the compliant contact structure can be displaced such that the second end moves in relation to the end of the compliant contact structure.

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~~93~~. (Added) An assembly comprising:

an electric component;

said electronic component comprising a substrate;

said substrate has a surface;

a plurality of contact locations at said surface;

a fanout member;

said fanout member comprises an electrical conductor comprising a contact location end and a fanout location end;

said contact location end is electrically connected to at least one of said plurality of contact locations at said surface;

said fanout location end is displace relative to said at least one of said plurality of contact locations;

an elongated electrical conductor comprising a first end and a second end;

said first end of said elongated electrical conductor is electrically connected to said fanout location end;

said second end of said elongated electrical conductor is not adjacent said electronic component;

said elongated electrical conductor is free standing;

said elongated electrical conductor is compliant and can be displaced so that said second end thereof moves in relation to the first end of said elongated electrical conductor; and

said assembly including an active semiconductor device connected to function by communication of electrical power through at least one said elongated electrical conductors.

B1 93. (Added) The assembly according to claim 93, wherein said elongated electrical conductor has a coating.

94. (Added) The assembly according to claim 94, wherein said coating is selected from the groups consisting of Au, Cr, Co, Ni and Pd.

95. (Added) The assembly according to claim 93, wherein said elongated electrical conductor comprises a material selected from the group consisting of gold, aluminum, copper, nickel, palladium, gold alloy and copper alloy.

96. (Added) The assembly according to claim 93, wherein said fanout member comprises a thin film wiring structure.

97. (Added) The assembly according to claim 93, wherein said fanout member is a space transformer substrate.

98. (Added) An assembly comprising:

an electric component;

said electronic component comprising a substrate;

B1 said substrate has a surface;

a plurality of contact locations at said surface;

a fanout member;

said fanout member comprises an electrical conductor comprising a contact location end and a fanout location end;

said contact location end is electrically connected to at least one of said plurality of contact locations at said surface;

said fanout location end is displace relative to said at least one of said plurality of contact locations;

an elongated electrical conductor comprising a first end and a second end;

said first end of said elongated electrical conductor is electrically connected to said fanout location end;

said second end of said elongated electrical conductor is not adjacent said electronic component;

said elongated electrical conductor is free standing; and

said elongated electrical conductor is compliant and can be displaced so that said second end thereof moves in relation to the first end of said elongated electrical conductor.

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100. (Added) A method of fabricating a fanout electrical contact structure comprising:

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providing a substrate;

said substrate has a surface;

fabricating a plurality of contact locations at said surface;

fabricating a fanout member;

said fanout member comprises an electrical conductor comprising a contact location end and a fanout location end;

electrically connecting said contact location end to at least one of said plurality of contact locations at said surface;

fabricating said fanout member so that said fanout location end is displaced relative to said at least one of said plurality of contact locations;

fabricating an elongated electrical conductor comprising a first end and a second end;

electrically connecting said first end of said elongated electrical conductor to said fanout location end;

said second end of said elongated electrical conductor is not adjacent said electronic component;

said elongated electrical conductor is free standing; and

said elongated electrical conductor is compliant and can be displaced so that said second end thereof moves in relation to the first end of said elongated electrical conductor.

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~~101~~. (Added) The method according to claim 100, further including coating said elongated electrical conductor with a coating material.

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~~102~~. (Added) The method according to claim 101, wherein said coating is material selected from the group consisting of Au, Cr, Co, Ni and Pd.

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~~103~~. (Added) The method according to claim 100, wherein said elongated electrical conductor comprises a material selected from the group consisting of gold, aluminum, copper, nickel, aluminum, gold alloy and copper alloy.

~~104~~. (Added) The method according to claim 100, wherein said fanout member comprises a thin film wiring structure.

~~105~~. (Added) The method according to claim 100, wherein said fanout member is a space transformer substrate.

~~106~~. (Added) A method of fabricating a fanout electrical contact structure comprising:

providing a substrate;

said substrate has a surface;

fabricating a plurality of contact locations at said surface;

fabricating a fanout member;

said fanout member comprises an electrical conductor comprising a contact location end and a fanout location end;

electrically connecting said contact location end to at least one of said plurality of contact locations at said surface;

fabricating the fanout member so that said fanout location end is displaced relative to said at least one of said plurality of contact locations;

B1 fabricating an elongated electrical conductor comprising a first end and a second end;

electrically connecting said first end of said elongated electrical conductor to said fanout location end;

said second end of said elongated electrical conductor is not adjacent said electronic component;

said elongated electrical conductor is free standing;

said elongated electrical conductor Is compliant and can be displaced so that said second end thereof moves in relation to the first end of said elongated electrical conductor; and

electrically connecting said elongate electrical conductor to a semiconductor device.

106. (Added) A semiconductor assembly comprising:

an assembly substrate;

at least one semiconductor die; and

a plurality of free standing elongate flexible interconnection elements located between the die and the assembly substrate, each having a first portion contacting the assembly substrate and a second portion contacting the semiconductor die, each elongate flexible interconnection element extends from one of the semiconductor die and the assembly substrate, whereafter the elongate flexible interconnection element alters direction at least once, and each elongate flexible interconnection element includes an elongate flexible element of a first material, and a second material on the elongate flexible element wherein the elongate flexible element with the second material thereon is compliant.

107. (Added) The semiconductor assembly of claim 107, wherein the substrate has a first set of contact pads and the semiconductor die has a second set of contact pads and each elongate flexible interconnection element has a first portion contacting a respective contact pad of the first set of contact pads, and a second portion contacting a respective contact pad of the second set of contact pads.

108. (Added) The semiconductor assembly of claim 107, wherein the elongate flexible interconnection element has a portion permanently attached to the assembly substrate.

109. (Added) An electronic assembly comprising:

a first substrate having a first set of contact pads;

a second substrate having a second set of contact pads; and

a plurality of elongate flexible interconnection elements located between the first substrate and the second substrate, each being free standing and having a portion permanently attached to a respective contact pad of the first set of contact pads and a second portion contacting a respective contact pad of the second set of contact pads, each elongate flexible interconnection element extending from the first substrate, whereafter the elongated flexible interconnection element alters direction at least once, each elongated flexible interconnection element including an elongated flexible element of a first material, and a second material on the elongated flexible element wherein the elongate flexible element with the second material thereon is compliant, the first and second substrates being brought into fixed relationship relative to one another.

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~~11~~ 10. (Added) The electronic assembly of claim 110, wherein one of the substrates comprises a material selected from the group consisting of a semiconductor die, a printed circuit board, a plastic substrate, a ceramic substrate, and a polymer based substrate.

~~12~~ 11. (Added) The electronic assembly of claim 110, wherein one of the substrates is a semiconductor die.

~~13~~ 12. (Added) The electronic assembly of claim 110, wherein the second substrate is a semiconductor die.

~~14~~ 13. (Added) The electronic assembly of claim 110, wherein, for each interconnection element of a first plurality of the free standing interconnection elements, a contact region distant from the substrate on a given interconnection element is substantially in a common plane with corresponding contact regions of the first plurality of interconnection elements.

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115. (Added) The electronic assembly of claim 110, wherein the elongated flexible element has a portion connected to a respective terminal of the first set of contact pads.

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116. (Added) The electronic assembly of claim 115, wherein an end of the elongate flexible element is connected to the respective terminal.

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117. (Added) The electronic assembly of claim 110, wherein the second material passivates of the interconnection element.

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118. (Added) The electronic assembly of claim 110, wherein the first material includes a material selected from the group consisting of gold, aluminum, copper, nickel, palladium, gold alloy and copper alloy.

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119. (Added) The electronic assembly of claim 110, wherein the first material includes a material selected from the group consisting of gold, aluminum and copper.

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120. (Added) The electronic assembly of claim 110, wherein the elongate flexible element has a cross-dimension of between 0.001 and 0.005 inches.

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121. (Added) The electronic assembly of claim 110, wherein the elongate flexible element is a wire.

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122. (Added) The electronic assembly of claim 110, wherein the second material is connected to the respective terminal.

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123. (Added) The electronic assembly of claim 110, wherein the second material is stronger than the elongate flexible element.

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124. (Added) The electronic assembly of claim 110, wherein the second material is a coating which is deposited around the elongate flexible element.

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125. (Added) The electronic assembly of claim 110, wherein the second material comprises a material selected from the group consisting of nickel, cobalt, copper, gold, platinum and palladium.

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126. (Added) The electronic assembly of claim 110, wherein the second material comprises a material selected from the group consisting of nickel and cobalt.

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127. (Added) The electronic assembly of claim 110, wherein the second material is a thin layer.

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128. (Added) The electronic assembly of claim 110, wherein the second material is selected from the group consisting of an electroplated, electrolessly plated, sputtered and e-beam evaporated coating.

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129. (Added) The electronic assembly of claim 110, wherein the elongate flexible element has a cross-dimension of between 0.001 and 0.005 inches and the second material is a thin layer.

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130. (Added) The electronic assembly of claim 110, wherein the first material and the second material are both conductive.

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131. (Added) The electronic assembly of claim 130, wherein the second material is formed directly on the elongate element.

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132. (Added) The electronic assembly of claim 110, wherein the first material comprises a material selected from the group consisting of gold, gold alloy, copper, copper alloy, aluminum, nickel and the second material is selected from the group consisting of Au, Cr, Co, Ni and Pd.

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133. (Added) The electronic assembly of claim 110, wherein the first material includes a material selected from the group consisting of gold, aluminum and copper,

and the second material includes a material selected from the group consisting of nickel and cobalt.

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134. (Added) The electronic assembly of claim 110, wherein the elongate flexible element is a core element and the second material is located around the core element.

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135. (Added) A structure comprising:

an assembly substrate;

at least one semiconductor die; and

a plurality of free standing elongate flexible interconnection elements located between the die and the assembly substrate, each having a first portion contacting the assembly substrate and a second portion contacting the semiconductor die, each elongate flexible interconnection element extends from one of the semiconductor die and the assembly substrate, whereafter the elongate flexible interconnection element alters direction at least once, and each elongate flexible interconnection element includes an elongate flexible element of a first material, and a second material on the elongate flexible element wherein the elongate flexible element with the second material thereon is compliant.

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136. (Added) A structure comprising:

a first substrate having a first set of contact pads;

a second substrate having a second set of contact pads; and

a plurality of elongate flexible interconnection elements located between the first substrate and the second substrate, each being free standing and having a portion permanently attached to a respective contact pad of the first set of contact pads and a

second portion contacting a respective contact pad of the second set of contact pads, each elongate flexible interconnection element extending from the first substrate, whereafter the elongate flexible interconnection element alters direction at least once, each elongate flexible interconnection element including an elongate flexible element of a first material, and a second material on the elongate flexible element wherein the elongate flexible element with the second material thereon is compliant, the first and second substrates being brought into fixed relationship relative to one another.

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137. (Added) The semiconductor assembly of claim 107, wherein said assembly is a probe for a semiconductor device.

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138. (Added) The semiconductor assembly of claim 107, wherein said assembly is a connector for a semiconductor device.

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139. (Added) The semiconductor assembly of claim 110, wherein said assembly is a probe for a semiconductor device.

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140. (Added) The semiconductor assembly of claim 110, wherein said assembly is a connector for a semiconductor device.

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141. (Added) The semiconductor assembly of claim 107, wherein said structure is a probe for a semiconductor device.

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142. (Added) The semiconductor assembly of claim 107, wherein said structure is a connector for a semiconductor device.

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143. (Added) The semiconductor assembly of claim 110, wherein said structure is a probe for a semiconductor device.